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तैयार डोसा मिश्रण — विशिष्टि  
( पहला पुनरीक्षण )

Ready Dosa Mix — Specification  
( First Revision )

ICS 67.060

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## FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Ready-to-Eat Foods and Specialised Products Sectional Committee had been approved by the Food and Agriculture Division Council.

*Dosa* is a very popular breakfast item in India. The use of ready *dosa* mix dispenses with the laborious grinding process and is gaining in popularity. It was, therefore, considered desirable to formulate an Indian Standard Specification for the product so that a mix of the right quality would be available, to consumers. This standard is expected to help in exercising the necessary quality control in the manufacturing of good quality ready *dosa* mix under hygienic conditions. The process of making *dosa* using the ready mix involves suspending the mix in water (approximately 1.25 parts) to get a batter of appropriate consistency, and thereafter following the same procedure as for the traditional method.

This standard was originally published in 1983. The current (*first revision*) has been brought in the view of latest technological advancements and the major changes include:

- a) List of mandatory ingredients has been modified;
- b) Requirements of ash content and acid insoluble ash has been modified;
- c) Requirement of dietary fibre has been added;
- d) Requirement of fat content has been included; and
- e) Limits for aflatoxin, lead and cadmium content have been specified along with their test methods.

In the formulation of this standard, due consideration has been given to the provisions of the *Food Safety and Standards Act*, 2006 and the Rules and Regulations framed thereunder and the *Legal Metrology (Packaged Commodities) Rules*, 2011. However, this standard is subject to the restrictions imposed under these, wherever applicable.

The composition of the committee responsible for the formulation of this standard is listed in Annex D.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard***READY DOSA MIX — SPECIFICATION***( First Revision )***1 SCOPE**

This standard prescribes the requirements and methods of sampling and test for ready to use *dosa* mix.

**2 REFERENCES**

The standards listed in Annex A contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of these standards listed in Annex A.

**3 TERMINOLOGY**

For the purpose of this standard, *dosa* mix shall mean the ready dry mix containing rice flour and black gram or chick pea or green gram flour, with or without optional ingredients, intended for preparation of *dosa*.

**4 REQUIREMENTS****4.1 Description**

*Dosa* mix shall be in the form of a white to off white powder. It shall be free from rancidity, insect or fungus infestation and from fermented, musty or other objectionable odours. It shall be free from added colouring matter and flavours.

**4.2 Ingredients****4.2.1 Mandatory Ingredients**

*Dosa* mix shall be made from the following ingredients:

- a) *Rice flour* — Rice flour shall be made from parboiled or a mixture of parboiled and raw rice, free from smell, and should pass through 500 micron IS sieve with maximum 5 percent retention on the sieve [see IS 460 (Part 1)]; and

- b) *Dal flour* — *Dal* (pulse) flour shall be made from decuticled and/or dehusked black gram or chick pea or green gram *dal* and should pass through 500 micron IS sieve with maximum 5 percent retention on the sieve [see IS 460 (Part 1)].

**4.2.2 Optional Ingredients**

*Dosa* mix may also contain following ingredients:

- a) Edible salt – Conforming to IS 7224;
- b) Millets;
- c) Edible vegetable oil and fats or their products;
- d) Spices and condiments;
- e) Dehydrated vegetables;
- f) Dried coconut products;
- g) Nuts; and
- h) Oilseeds.

**4.2.3** All ingredients shall be food grade, free from dirt, extraneous matter and insect infestation.

**4.3** The Product may contain food additives in levels prescribed under *Food Safety and Standards (Food Product Standards and Food Additives) Regulations, 2011*.

**4.4 Processing**

*Dosa* mix is made by grinding separately the rice and black gram/chick pea/green gram *dal* in a mill to obtain particles of the appropriate sizes (see 4.2) and mixing these with the other dry ingredients in suitable proportions.

**4.5** When tested by the method prescribed in Annex B, *dosa* mix shall be free from dirt and other extraneous matter.

**4.6** *Dosa* mix shall be manufactured and packed in premises maintained in hygienic conditions (see IS 2491).

**4.7** *Dosa* mix shall also comply with the requirements given in Table 1 and Table 2.

**4.8** The metal contaminants and other toxic substances, if any, in the *dosa* mix shall not exceed the limits specified in Table 3.

**4.9** The pesticide residues, if any, in the product shall not exceed the limits as prescribed in the *Food Safety and Standards (Contaminants, Toxins and Residues) Regulations*, 2011.

## 5 PACKING

*Dosa* mix shall be packed in flexible thermoplastic films of multilayer or monolayer construction, or their laminates with paper and/or aluminium foil so as to provide high resistance to the passage of oxygen and to produce an effective heat seal. The plastic used in packaging of product should comply with IS 10171. The sealing shall be done hermetically with or without nitrogen flushing to retain the contents in a fresh condition.

## 6 MARKING

**6.1** Each container shall be legibly and indelibly marked so as to give the following information:

- a) Name of the material;

- b) Name and address of the packer/manufacturer;
- c) Date of packing;
- d) Lot/batch number;
- e) Net quantity;
- f) Date before which the contents should be consumed be indicated by marking the words 'Use by date/expiry date .....(DD/MM/YY)';
- g) Storage instructions (including use by date after opening the package);
- h) Directions for use; and
- j) Any other information required under the *Legal Metrology (Packaged Commodities) Rules*, 2011 and *Food Safety and Standards (Labelling and Display) Regulations*, 2020.

## 6.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.

**Table 1 Physico-Chemical Requirements for *Dosa* Mix**  
(Clauses 4.7)

Sl No. (1)	Characteristic (2)	Requirement (3)	Method of Test, Ref to (4)
i)	Moisture, percent by mass, <i>Max</i>	12.0	Annex C of IS 2234
ii)	Total ash, percent by mass (dry basis), <i>Max</i>	2.0	Annex D of IS 2234
iii)	Acid insoluble ash, percent by mass (dry basis), <i>Max</i>	0.15	Annex E of IS 2234
iv)	Total protein, percent by mass (dry basis), (N x 6.25), <i>Min</i>	12.0	Annex F of IS 2234
v)	Total fat, percent by mass (dry basis), <i>Max</i>	2.0	IS 11721
vi)	Carbohydrates, percent by mass (dry basis), <i>Max</i>	80.0	(see Note)
vii)	Dietary fibre, percent by mass (dry basis), <i>Min</i>	1.0	IS 11062
viii)	Leavening index, <i>Min</i>	1.25	Annex C

NOTE — The carbohydrate content shall be calculated by difference, that is, 100 – [percent of protein (dry basis) + percent of total ash (dry basis) + percent of dietary fibre (dry basis)].

**Table 2 Microbiological Requirements for Dosa Mix**  
(Clauses 4.7)

Sl No.	Characteristic	Requirement	Method of Test, Ref to
(1)	(2)	(3)	(4)
i)	<i>Salmonella sp.</i> per 25 g	Absent	IS 5887 (Part 3/Sec 1)
ii)	<i>Shigella sp.</i> per 25 g	Absent	IS 5887 (Part 7)
iii)	<i>E.coli</i> per g	Absent	IS 5887 (Part 1) or 16424 : 2016*

NOTE — In case of any dispute, the method indicated by ‘\*’ shall be the referee method.

**Table 3 Limits of Metal Contaminants and Other Toxic Substances**  
(Clause 4.8)

Sl No.	Parameters	Limit	Method of Test, Ref to
(1)	(2)	(3)	(4)
i)	Lead, mg/kg, <i>Max</i>	0.2	IS 12074 or AOAC 2015.01*
ii)	Cadmium, mg/kg, <i>Max</i>	0.1	15 of IS 1699 or AOAC 2015.01*
iii)	Total aflatoxin, µg/kg, <i>Max</i>	5.0	IS 16287

NOTE — In case of any dispute, the method indicated by ‘\*’ shall be the referee method.

## 7 SAMPLING

Representative samples of the material shall be drawn and the criteria for conformity to the material to the requirements of the specification shall be determined according to the procedure given in Annex H of IS 2234.

## 8 TESTS

**8.1** Tests shall be carried out in accordance with **4.5**,

col (4) of Table 1, Table 2 and Table 3.

### 8.2 Quality of Reagent

Unless specified otherwise, analytical grade chemicals shall be employed in tests and distilled water (*see* IS 1070) shall be used where the use of water as a reagent is intended.

## ANNEX A

(Clause 2)

## LIST OF REFERRED STANDARDS

<i>IS No./Other Publications</i>	<i>Title</i>	<i>IS No./Other Publications</i>	<i>Title</i>
IS 460 (Part 1) : 2020	Test Sieves — Specification: Part 1 Wire cloth test sieves ( <i>fourth revision</i> )	IS 10171 : 1999	Guide on suitability of plastics for food packaging ( <i>second revision</i> )
IS 1070 : 1992	Reagent grade water — Specification ( <i>third revision</i> )	IS 11062 : 2019	Method for estimation of total dietary fibre in foodstuffs ( <i>first revision</i> )
IS 1699 : 1995	Methods of sampling and test for food colours ( <i>second revision</i> )	IS 11721 : 2013/ISO 1736 : 2008	Dried milk and dried milk products — Determination of fat content — Gravimetric method (Reference Method) ( <i>second revision</i> )
IS 2234 : 2023	Ready <i>idli</i> mix — Specification ( <i>second revision</i> )	IS 12074 : 1987	Method for determination of lead by atomic absorption spectrophotometer
IS 2491 : 2013	Food hygiene — General principles — Code of practice ( <i>third revision</i> )	IS 16287 : 2015/ISO 16050 : 2003	Foodstuffs — Determination of aflatoxin B1, and the total content of aflatoxins B1, B2, G1 and G2 in cereals, nuts and derived products High performance liquid chromatographic method
IS 5887 (Part 1) : 1976	Methods for detection of bacteria responsible for food poisoning: Isolation, identification and enumeration of <i>Escherichia coli</i> ( <i>first revision</i> ):	IS 16424 : 2016 /ISO 7251 : 2005	Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of presumptive <i>Escherichia coli</i> — Most probable number technique
(Part 3/Sec 1) : 2020/ISO 6579-1 : 2017	Horizontal Method for the Detection, Enumeration and Serotyping of Salmonella, Section 1 Detection of Salmonella spp. ( <i>third revision</i> )		
(Part 7) : 1999	General guidance on methods for isolation and identification of <i>shigella</i>		
IS 7224 : 2006	Iodized salt, vacuum evaporated iodized salt and refined iodized salt — Specification ( <i>second revision</i> )		

**ANNEX B***(Clause 4.5)***DETERMINATION OF FREEDOM FROM DIRT AND EXTRANEEOUS MATTER****B-1 PROCEDURE**

**B-1.1** Take about 10 g of the material in a 250 ml beaker and add 100 ml of water. Stir the material

with a glass rod to form a suspension and allow it to stand for 2 h. Examine the supernatant water, surface and bottom of the sediment for dirt or other suspended and extraneous matter.

**ANNEX C***[Table 1, Sl No. (viii)]***DETERMINATION OF LEAVENING INDEX****C-1 PROCEDURE**

**C-1.1** Add 100 g of mix with gentle stirring, into 250 ml water in a beaker and make a uniform batter without lumps. Transfer the batter to a 500 ml measuring cylinder and note the initial volume. Note the volume after 15 min.

**C-2 CALCULATION**

**C-2.1** Calculate leavening index as follows:

$$\text{Leavening index} = \frac{V}{v}$$

where

$V$  = final volume of the batter; and  
 $v$  = initial volume of the batter.

## ANNEX D

(Foreword)

## COMMITTEE COMPOSITION

Ready-to-Eat Food and Specialized Products Sectional Committee, FAD 24

<i>Organization</i>	<i>Representative(s)</i>
National Institute of Food Technology Entrepreneurship and Management, Sonipat	DR ASHUTOSH UPADHYAY ( <b>Chairperson</b> )
Agricultural & Processed Food Products Export Development Authority (APEDA), New Delhi	DR REEBA ABRAHAM
All India Food Processors Association, New Delhi	DR VAIBHAV KULKARNI DR A. K. TYAGI ( <i>Alternate</i> )
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Consumer Voice, New Delhi	SHRI M.A.U KHAN
CSIR - Indian Institute of Toxicology Research, Lucknow	DR KAUSAR M. ANSARI DR SANDEEP SHARMA ( <i>Alternate</i> )
Defense Food Research Laboratory, Mysore	DR R. KUMAR DR R. SHYLAJA ( <i>Alternate</i> )
Food Safety & Standards Authority of India, New Delhi	MS RUBY MISHRA
Haldiram Snacks Pvt Ltd, Noida	SHRI RAVI MEHTA
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ICAR-National Dairy Research Institute, Karnal	DR P. NARENDRA RAJU DR NEELAM UPADHYAY ( <i>Alternate</i> )
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<i>Organization</i>	<i>Representative(s)</i>
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National Institute of Technology, Rourkela	SHRIMATI RACHANA SEHRAWAT DR MOHD KHALID GUL ( <i>Alternate</i> )
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Sant Longowal Institute of Engineering and Technology, Longowal	SHRI KAMLESH PRASAD SHRI PRADYUMAN KUMAR ( <i>Alternate</i> )
BIS Directorate General	SHRIMATI SUNEETI TOTEJA, SCIENTIST 'E'/DIRECTOR AND HEAD (FOOD AND AGRICULTURE) [REPRESENTING DIRECTOR GENERAL ( <i>Ex-officio</i> )]

*Member Secretary*  
MS LAVIKA SINGH  
SCIENTIST 'B'/ASSISTANT DIRECTOR  
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Panel for Ready-to-Eat Batters & Mixes, FAD 24/Panel III

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### Amendments Issued Since Publication

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